



P53821C (CPA / Small Entity) 16 March 2000

Applicant: RICHARD G. HYATT JR.

S.N.: 08/720,070

Filed: 27 September 1996

For: *ELECTROMECHANICAL CYLINDER PLUG.*

Document(s) filed:

1. AMENDMENT
2. Check #36235 for \$210.00 & Fee Transmittal



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Complete If Known	
Application Number	08/720,070 (filed on 27 September 1996)
Filing Date	CPA filed on 8 July 1999
First Named Inventor	RICHARD G. HYATT JR.
Examiner Name	BOUCHER, D.
Group/Art Unit	3627

TOTAL AMOUNT OF PAYMENT (\$ 210.00)

Attorney Docket No. P53821C

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1. BASIC FILING FEE

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Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
101	760	201	380	Utility filing fee	\$
106	310	206	155	Design filing fee	\$
107	480	207	240	Plant filing fee	\$
108	760	208	380	Reissue filing fee	\$
114	150	214	75	Provisional filing fee	\$
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139	130	139	130	Non-English specification	\$
147	2,520	147	2,520	For filing a request for reexamination	\$
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	\$
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115	110	215	55	Extension for reply within first month	\$
116	380	216	190	Extension for reply within second month	\$
117	870	217	435	Extension for reply within third month	\$
118	1,360	218	680	Extension for reply within fourth month	\$
128	1,850	228	925	Extension for reply within fifth month	\$
119	360	219	150	Notice of Appeal	\$
120	300	220	150	Filing a brief in support of an appeal	\$
121	260	221	130	Request for oral hearing	\$
138	1,510	138	1,510	Petition to institute a public use proceeding	\$
140	110	240	55	Petition to revive - unavoidable	\$
141	1,210	241	605	Petition to revive - unintentional	\$
142	1,210	242	605	Utility issue fee (or reissue)	\$
143	430	243	215	Design issue fee	\$
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122	130	122	130	Petitions to the Commissioner	\$
123	50	123	50	Petitions related to provisional applications	\$
126	240	126	240	Submission of Information Disclosure Statement	\$
581	40	581	40	Recording each patent assignment per property (Times number of properties)	\$

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Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim, if not paid
109	78	209	39	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2) (\$ 210.00)				

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

RICHARD G. HYATT Jr.

Serial No.: 08/720,070 (CPA application) Examiner: BOUCHER, D.

Filed: 27 September 1996 Art Unit: 3627

For: ELECTROMECHANICAL CYLINDER PLUG

AMENDMENT

Assistant Commissioner
for Patents
Washington, D.C. 20231

Sir:

In response to the Examiner's request set forth in Paper No. 31 dated on the 15th of February 2000, and in further response to the premature Office action dated 17 August 1999 (Paper No. 25), entry of the following amendments, re-consideration and re-examination are respectfully requested.

Folio: P53821C
Date: 03/16/00
I.D.: REB/kf

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IN THE CLAIMS

Please add claims 85 through 90, as follows:

1 --85. An electromechanical lock cylinder, comprising:

2 an outer shell having a bore formed therein and a cavity extending from the bore into the
3 shell;

4 a barrel disposed within the bore in the shell and being rotatable relative thereto;

5 a side bar cooperating between the shell and the barrel for selectively permitting and blocking
6 rotation of the barrel with respect to the shell, the side bar having a first portion engaging the barrel
7 and a second portion removably received in the cavity in the shell, the side bar being movable
8 relative to the barrel;

9 wherein at least one electromechanical locking member is disposed within the barrel and is
10 positionable in a barrel blocking position which blocks rotation of the barrel with respect to the shell,
11 and also is positionable in a non-barrel blocking position which permits the side bar to be moved
12 relative to the cavity in the shell to rotate the barrel with respect to the shell;

13 an electronically powered drive mechanism located within the barrel and cooperating with
14 the electromechanical locking member to selectively move the locking member from the barrel
15 blocking position to the non-barrel blocking position in which the side bar moves out of the cavity
16 and engages the locking member to rotate the barrel and operate the lock; and

17 control means for activating the electronically powered drive mechanism in response to an
18 authorized attempt to operate the lock cylinder.

1 --86. The lock cylinder of claim 85, further comprised of:

2 said drive mechanism comprising an electrical coil moving said locking member to
3 reciprocate said locking member between said non-barrel blocking position and said barrel blocking
4 position in response to activation by said control means; and

5 said locking member bearing a circumferential surface blocking movement of said side bar
6 while said locking member is in said barrel blocking position, and accommodating said radial
7 movement while said distal member is in said non-barrel blocking position.

1 --87. The lock cylinder of claim 85, further comprised of:

2 said drive mechanism comprising an electrical coil moving said locking member to rotate
3 said locking member between said non-barrel blocking position and said barrel blocking position
4 in response to activation by said control means; and

5 said locking member bearing an external feature blocking movement of said side bar while
6 said locking member is in said barrel blocking position, and accommodating said radial movement
7 while said distal member is in said non-barrel blocking position.

1 --88. A lock cylinder according to claim 85, wherein the first portion of the side bar is an
2 outer edge and the second portion is an opposite inner edge, and when the at least one locking
3 member is in said barrel blocking position the outer edge of the side bar is received in the cavity
4 formed in the shell, and wherein the at least one locking member has a groove which receives the

5 inner edge of the side bar when the at least one locking member is in said non-barrel blocking
6 position.

1 --89. A rotatable lock barrel for insertion into a lock cylinder having a bore formed therein,
2 the barrel comprising:

3 an elongated, generally cylindrically shaped barrel member having an exterior configured for
4 receipt in a bore of a lock cylinder and an interior containing an electromechanical locking member,
5 the barrel member having a recess formed therein;

6 wherein the locking member is disposed in the recess of the barrel member and is
7 substantially entirely contained within the barrel member, the locking member including a groove
8 and the locking member being movable to a position in which the groove of the locking members
9 is aligned;

10 the recess in said barrel member being configured to receive at least a portion of a movable
11 side bar of a lock cylinder to permit the side bar to move into and out of engagement with the groove
12 of the locking member for selectively permitting and blocking rotation of the barrel member with
13 respect to a lock cylinder when positioned therein;

14 an electronically powered drive mechanism located within the barrel member for moving the
15 electromechanical locking member to a position in which the groove of the locking member is
16 aligned.

1 --90. A process of retrofitting a mechanical cylinder lock to form an electromechanical

2 cylinder lock, the process comprising steps of:

3 providing a mechanical cylinder lock including an outer shell with a bore, a first rotatable
4 barrel located in the bore, and a side bar for preventing and permitting rotation of the barrel within
5 the bore in the shell;

6 removing the first barrel from the shell;

7 providing an electronically powered rotatable barrel having an exterior adapted to
8 substantially correspond to the bore in the shell, and including:

9 at least one electromechanical locking member disposed in the barrel, the electromechanical
10 locking member being positionable to permit the side bar to engage the locking member in a non-
11 barrel blocking position which permits the barrel to rotate with respect to the shell, and the
12 electromechanical locking member also being positionable in a barrel blocking position which
13 blocks rotation of the barrel with respect to the shell; and

14 an electronically powered drive mechanism cooperating with the electromechanical locking
15 member to selectively move the locking member from the barrel blocking position to the non-barrel
16 blocking position in which the side bar engages the locking member to rotate the barrel and operate
17 the lock; and

18 securing the electronically powered rotatable barrel in the bore in the shell to form an
19 electromechanical cylinder lock, the lock including control means carried by at least one of the
20 barrel and bore for energizing the electronically powered drive mechanism in response to an
21 authorized attempt to open the lock.

REMARKS

Claims 1 through 59 and 64 through 90 are pending in this application. Claims 85 through 90 have been newly added by this Amendment.

Claims 1 through 24, 34 through 38, and 57 through 59 have been allowed while claims 32, 33, 43 through 45, 53 and 55 have improperly been withdrawn from consideration. Claims 85 through 88, copied substantially verbatim from U.S. Patent No. 5,839,307 issued on 24 November 1998 to Peter Field and Michael Lumpkin, correspond to previously presented Claims 60 through 63. As was explained in Applicant's Second Supplemental Amendment of the 17th of August 1999, claim 85 is copied from claim 1 of the Field '307 patent by the addition of a comma in the preamble; claim 86 is copied from dependent claim 2 of Field '307; claim 87 is copied from claim 14 of Field '307, with the number of the locking member changed to singular; and claim 88 is copied verbatim from claim 19 of Field '307.

Applicant's Figs. 1-18, for example, disclose, *inter alia*, shell 102, cavity 102d, barrel 70, side bar 101g, cavity 102a (to the extent that this cavity is different from the cavity 102d referred to in line 2 of claim 1 of Field '307), locking member 105, drive mechanism 105b and control means 104. Accordingly, all elements defined in newly added claims 85 through 87, and all of the process steps defined in claim 88 are found in Applicant's specification. Retrofitting is expressly disclosed on page 4, lines 16-18, for example, as well as in lines 8-11 on page 21 and lines 4-19 of page 18 of Applicant's original specification.

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Should the Examiner desire to entertain a requirement for restriction of claim 85 through 90, or alternatively, an election of species, the Examiner is requested to immediately telephone Applicant's undersigned attorney.

The request for cancellation in Applicant's paper of the 6th of October erroneously identified the wrong claims for cancellation. It was Applicant's intention to have canceled, among others, non-elected claims 33 and 35, but through typographic error, the amendment inadvertently directed the cancellation of the claims for the proposed interference. To avoid another mistake, this paper is filed in substitution of the papers dated 6 October and 17 November 1999, no claims are canceled and claims 1 through 84 all remain pending. The Examiner's indication of readiness to issue a Declaration of Interference after the conclusion of the current year, is noted with appreciation.

Amended claims 39, 43, 46 and 56, together with newly added claims 64 through 84, define, among other things, the elected species of Figs. 8A through 8G. The Applicant notes that the Examiner had asserted that claims 43 through 45 were withdrawn from consideration; Applicant notes however, that claims 43 and 44 clearly define the elected species, while claim 45 depends upon the more generic parent independent claim 43. Accordingly, claims 43 and 44 must be considered.

Claims 25 through 31, 39 through 42, 46 through 52, 54 and 56 were alternatively rejected under 35 U.S.C. §102(e) as anticipated by, or under 35 U.S.C. §103(a) rendered obvious by, Gokcebay U.S. 5,552,777. Applicant traverses these rejections for the following reasons.

Each of these claims, together with newly presented claims 64 through 84, define, "*inter alia*," a "bar" interposed between a shell and a cylinder plug, and an "electrical operator". As defined by claim 25, for example, the electrical operator is "electrically operable to respond to a control signal by moving" In contradistinction, Gokcebay '777 uses a spring 48 that does not, respond to either a control signal or to any electrical stimulus by moving. The Examiner's attention is directed to the transitive and intransitive sense of the verb "move". In effect, the Examiner is rewriting Applicant's claims to substitute "by being *moved* between" for the express language currently used by these claims of "by *moving* between." This is an impermissible interpretation of Applicant's claims. In both mechanical and electrical analogues, the spring is considered as a passive, rather than an active component; consequently, the spring does not move itself, and must be moved by some external force. Applicant's electrical operator is defined by these claims as "being electrically operable to respond ... by *moving* between" These distinctions are significant because they provide Applicant with indirect, rather than direct locking, and a concomitant increase in mechanical advantage to the user of components such as a side bar or detent. These features are utterly lacking from the art represented by Gokcebay '777.

Moreover, the Examiner's interpretation of Gokcebay '777 to identify his spring 48 as something that is "considered electrically operable" is improper, and contrary to the express teachings of Gokcebay '777. In claim 1 of Gokcebay '777, by way of the example, lines 10 through 14 define the spring while lines 21 through 26 define the operator. These components are distinct, serve distinct functions and cannot be twisted, in their meaning, like a nose made of wax, in order

to improperly read these components upon Applicant's language.

Even assuming *arguendo* that the Gokcebay '777 blocking pin/armature item 38 is a "bar" instead of an armature and blocking pin, the Examiner's interpretation still has overlooked how the lock of Gokcebay '777 works and how that is different from the pending claims. According to Gokcebay '777, the "compression spring" item 48 is described in "Description of Preferred Embodiments" in Section 6 line 43 as follows: "The small solenoid 36 when powered overcomes the force of the compression spring 48. In section 8, line 21, it reads "When the solenoid is powered the blocking pin 38 will be released ie: retracted, and the operator [a human person] will be able to rotate the key in the lock, since the key bittings will match the bittings in the lock." Line 26 reads "the master ie: the microprocessor 72 sends the unique number again to U1 to turn off U2 and Q1, stopping the current to the solenoid and allowing the compression spring to *push the blocking pin outwardly* when the cylinder plug is returned to the locked position".

Of course the Gokcebay drawings illustrate the blocking pin/armature as being one in the same component, with the spring constituting merely a spring, and not, as was asserted by the Examiner, an "electrical operator".

If the Examiner believes that the "electrical operator" of the pending claims might be read as the spring of Gokcebay '777 and that the blocking pin of Gokcebay '777 could be read as a "bar" or sidebar, then Gokcebay's spring does not provide "obstruction of said bar" as defined by

Applicant's claims because, in fact, the spring provides no obstruction. It does exactly what Gokcebay describes, by biasing the blocking pin outwardly in the same manner as any biasing element, it intrinsically lacks the structure and is inherently devoid of the capacity to "obstruct" the "bar" simply because the same spring must freely and continuously, even in the absence of Applicant's control signal, allow *full* reciprocation of the blocking pin of Gokcebay '777. Spring 48 of Gokcebay '777 is neither able to both concurrently and simultaneously "respond to" Applicant's control signal, provide Applicant's "obstruction of said bar," or be "electrically operable". Consequently, spring 48 cannot be considered to "be electrically operable" as asserted by the Examiner in support of this rejection. Moreover, if spring 48 were "electrically operable to move ...," then solenoid 36 of Gokcebay '777 would have no function. In short, the Examiner must consider "the subject matter" of each of these claims "as whole" in conformance with the requirement of §103, and must recognize that determinations of obviousness require an evaluation of all of the elements of each claim. The Examiner cannot accurately assert that "spring 48" of Gokcebay '777 has all of the characteristics and attributes of "blocking pin 38" of Gokcebay '777 without impermissibly requiring the solenoid 36 and spring 48 to function in a mode that is contrary to the express teachings of Gokcebay '777.

Applicant's notes that previously presented dependent claims 82 through 84 are readily distinguishable from art of records such as Gokcebay U.S. Patent No. 5,552,777, by the presence of components biasing either the bar or the electrical operator, and that if a spring in Gokcebay '777 is interpreted as constituting an "electrical operator", as is explained in page 5 of the Examiner's

comments in Paper No. 25, it would be impossible to interpret Gokcebay '777 or Gokcebay U.S. patent No. 5,367,293 as either anticipating or making a *prima facie* showing of obviousness. It is these differences in detail, in combination with the elements of the parent claim 25, that advantageously endow Applicant's embodiments with their ability to quickly retrofit in existing cylinder lock with an additional and increased level of security. Accordingly, claims 82 through 84 are in condition for allowance.

In view of the foregoing distinctions, and the advantageous results flowing therefrom, withdrawal of the rejections and allowance of claims 25 through 33, 39 through 56, and 64 through 84, and newly added claims 85 through 90 is required.

A fee of \$210.00 (**SMALL ENTITY**) was incurred by four (4) extra claims and six (6) extra independent claims. The check of Applicant's attorney drawn to pay to the order of Commissioner of this amount, was presently paid. Applicant's check (#36235) drawn to the order of Commissioner accompanies this Substitute Amendment. Should the check become lost, should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

In view of the foregoing amendments and remarks, all claims are deemed to be in condition for allowance. Entry of these amendments, withdrawal of the single outstanding art rejection and passage of this application to issue is respectfully requested. Should questions remain unresolved however, the Examiner is requested to telephone Applicant's undersigned attorney.

Respectfully submitted,



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